

positioning a distal end of the catheter shaft adjacent a structure in or around a patient's heart such that an electrode terminal and a return electrode are located adjacent said structure;

spacing the return electrode away from the structure and the patient's heart;
and

applying a sufficient high frequency voltage difference between the electrode terminal and the return electrode to remove the structure from the patient's heart.

2. (New) The method of claim 1 wherein the applying step comprises applying a sufficient high frequency voltage difference between the electrode terminal and a return electrode to ablate a portion of the structure.

3. (New) The method of claim 2 wherein the spacing step is carried out by locating the return electrode proximal to the electrode terminal.

4. (New) The method of claim 2 wherein the high frequency voltage is applied in the presence of electrically conductive fluid.

5. (New) The method of claim 4 further comprising generating a current flow path through the electrically conductive fluid between the return electrode and the electrode terminal through the electrically conductive fluid.

6. (New) The method of claim 1 wherein the structure comprises heart tissue.

7. (New) The method of claim 1 wherein the electrode terminal and the return electrode are positioned at a distal portion of the catheter shaft and radially outward from the distal opening, the method further comprising rotating at least the distal portion of the catheter shaft during the applying step.

8. (New) The method of claim 1 wherein the electrode terminal comprises an electrode array of electrically isolated electrode terminals, the method further comprising applying high frequency voltage to the electrode array of electrically isolated electrode terminals and the return electrode in the presence of electrically conductive fluid such that an electrical current flows from each of the electrode terminals, through the electrically conductive fluid, and to the return electrode.

9. (New) The method of claim 1 further comprising aspirating a region around the structure.

10. (New) The method of claim 4 wherein the high frequency voltage is sufficient to vaporize the fluid in a thin layer between at least a portion of the electrode terminal and the structure.

11. (New) The method of claim 5 further comprising directing the electrically conductive fluid through a fluid lumen in the catheter shaft to generate a current flow path between the electrode terminal and the return electrode.

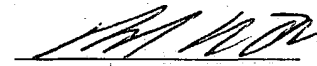
12. (New) The method of claim 1 further comprising applying high frequency voltage between the electrode terminal and the return electrode to remove tissue at the heart wall.

13. (New) The method of claim 12 further comprising forming a revascularizing channel through at least a portion of the heart wall, the revascularizing channel extending from a surface of the heart wall into the myocardium to restore blood flow to a portion of the myocardium.

14. (New) The method of claim 6 wherein the heart tissue is selected from the group consisting of epicardium, myocardium, and endocardium.

If the Examiner believes a telephone conference would expedite prosecution of this application, a telephone call to the undersigned attorney at (408) 736-0224 will be appreciated.

Respectfully submitted,


Richard R. Batt
Reg. No. 43,485

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Date

ArthroCare Corporation
680 Vaqueros Avenue
Sunnyvale, California 94085-3523
(408) 736-0224